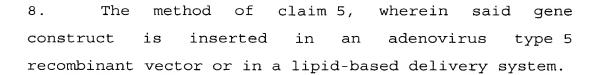
WE CLAIM:

- 1. A tumor-specific gene construct, which comprises a rat Hex II promoter in a suitable vector, wherein said promoter is selectively activated in tumor cells as compared with normal cells.
- 2. The game construct of claim 1, which further comprises LacZ or HSV Tk.
- 3. The gene construct of claim 1, wherein said vector is selected from one of a basic expression vector, a shuttle plasmid, an adenovirus type 5 recombinant vector or a lipid-based delivery system.
- 4. A vector for use in selective gene expression in a tumor cell, said vector comprising a rat Hex II promoter that is selectively activated in tumor cells as compared with normal cells.
- 5. A method for a tumor-selective expression of a gene in a cell comprising inserting in said cell a gene construct comprising said gene operably linked to a tumor-specific rat Hex II promoter, whereby said rat Hex II promoter is selectively activated in tumor cells as compared with normal cells.
- 6. The method of claim 5, wherein said gene construct is inserted in said cell in vitro.
- 7. The method of claim 5, wherein said gene construct is inserted in said cell in vivo.



- 9. The method of claim 5, wherein said gene encodes an enzyme that converts an otherwise non-toxic prodrug into its active form, wherein said method further comprises exposing said tumor.
- 10. The method of claim 9, wherein said gene is HSV Tk or Cytochrome P-450 TM 2B1.
- 11. The method of claim 10, wherein said gene is HSV Tk and wherein said prodrug is ganciclovir.
- 12. The method of claim 10, wherein said gene is Cytochrome P-450 TM 2B1 and wherein said prodrug is cyclophosphamide, penicillin, amidase or β -lactamase.
- 13. The gene construct of claim 1, wherein said construct is pHexII4557-SAT as set forth in Fig. 1.
- 14. The tumor-specific Hex II gene construct of claim 2, wherein said tumor cells are human tumor cells.
- 15. A tumor-specific Hex II gene construct comprising a rat Hex II promoter operatively linked to a gene and a vector selected from one of a basic expression vector, a shuttle plasmid, an adenovirus type 5 recombinant vector or a lipid-based delivery system.

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- 16. The tumor-specific Hex II gene construct of claim 15, wherein said rat Hex II promoter is provided in a negative orientation relative to a polycloning site of said vector.
- 17. The tumor-specific Hex II gene construct of claim 3 for use in selective expression of a gene in human tumor cells.
- 18. The tumor-specific Hex II gene construct of claim 15 for use in selective expression of a gene in non-human tumor cells.
- 19. The gene construct of claim 15, wherein said vector is p ElsplB and said construct is p ElsplBHex-LacZ as set forth in Fig. 2.
- 20. The gene construct of claim 15, wherein said vector is p Elsp1B and said construct is p Elsp1BHex-TK as set forth in Fig. 3.
- 21. A kit adapted to provide the tumor-specific gene construct of claim 1.
- 22. The kit of claim 21 for use in screening tumor specific gene expression in vitro.
- 23. The gene construct of claim 3, wherein said vector is an AdHexTK.
- 24. The gene construct of claim 3, wherein said vector is AdHexLacZ.

